Figure 1 N^{CH₃} OR₂ O. R₁O

1, $R_1 = R_2 = H$ 2, $R_1 = R_2 = COCH_3$

OH HO

3

OCH₃ 4

OCH₃

ŌН HQ. H ÓН ÒН

6

 $(CH_2)_3CH_3$ =NH OH HN ,o,,, HÓ 7

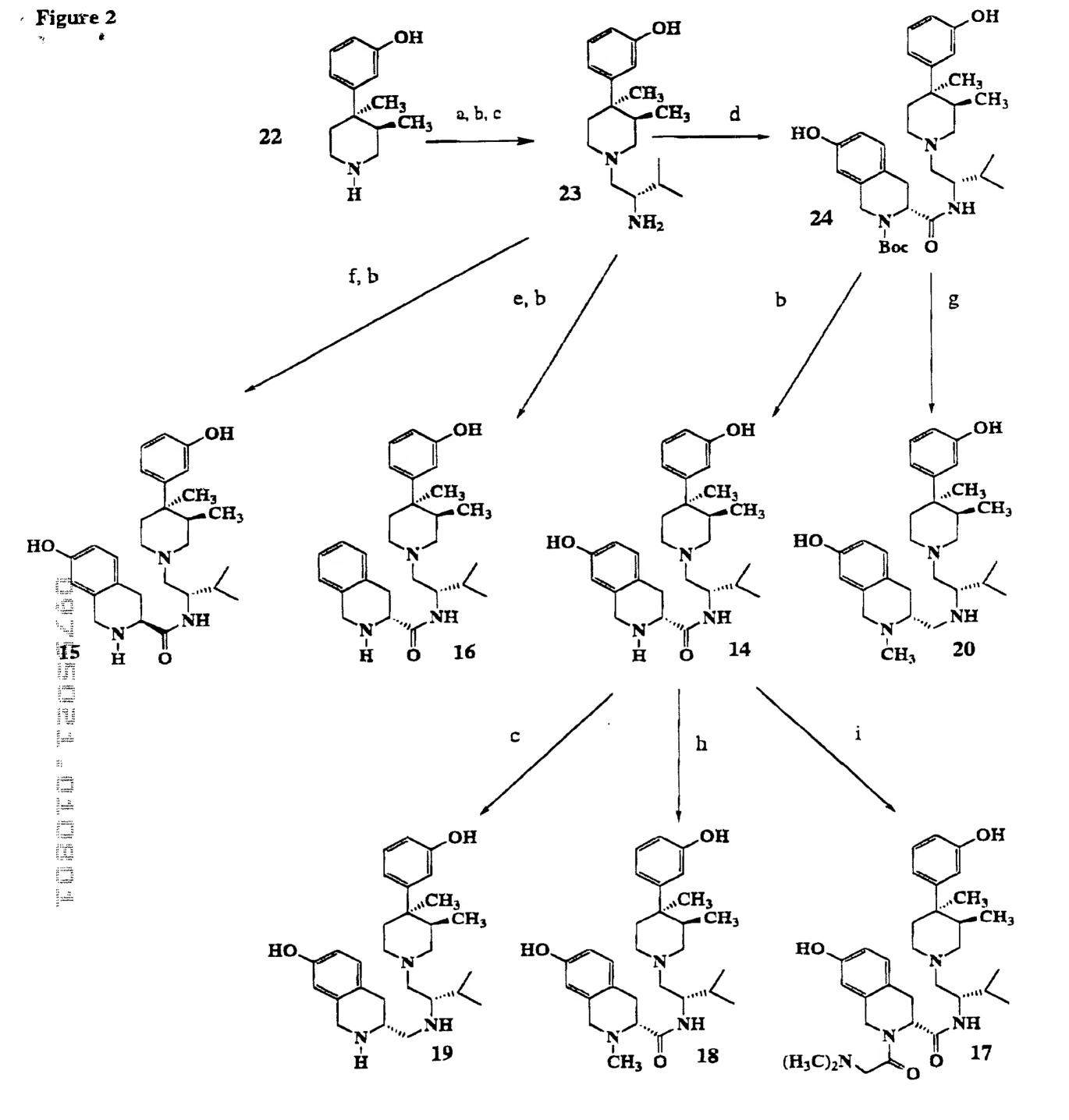
 NH_2 OH HN= ÌΗ 1-Z HÓ 8

OH. "..CH₃ ⊸CH₃

9a; R = CH₃ 9b; R = CH₂C₃H₅

OH. 10

HO,



Reagents: (a) Boc-L-valine, BOP, TEA, THF; (b) TFA, CH₂Cl₂; (c) borane/dimethyl sulfide; (d) Boc-D-7-hydroxy-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, BOP, TEA, THF; (e) Boc-D-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, BOP, TEA, THF; (f) Boc-L-7-hydroxy-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, BOP, TEA, THF; (g) Lithium aluminum hydride, THF; (h) formalin, NaBH(OAc)₃, dichloroethane; (i) N,N-dimethylglycine, BOP, TEA, THF

Reagents: (a) Boc-L-valine, BOP, TEA, THF; (b) TFA, CH₂Cl₂; (c) borane/dimethyl sulfide; (d) Boc-D-7-hydroxy-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, BOP, TEA, THF